IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Withdrawn) A method of etching a silicon-comprising substrate holder in a plasma processing system comprising:

placing said silicon-comprising substrate on said substrate holder;

introducing a reactive process gas to a process space in said plasma processing system, said reactive process gas comprising two or more of O_2, a fluorine-containing gas, and HBr;

introducing a Noble gas to said process space in said plasma processing system;

applying a first radio frequency (RF) signal to said substrate holder, wherein said first RF signal comprises a frequency greater than 10 MHz;

applying a second RF signal to said substrate holder, wherein said second RF signal comprises a frequency less than 10 MHz; and

etching said silicon film.

2. (Withdrawn) The method as recited in claim 1 further comprising:

applying a magnetic field to said process space, wherein said magnetic field comprises a magnetic field strength ranging from 5 to 500 Gauss.

3. (Withdrawn) The method as recited in claim 1, wherein said fluorine-containing gas comprises at least one of NF_3, SiF_4, and SF_6.

4. (Withdrawn) The method as recited in claim 1, wherein said first RF frequency is 40 MHz and said second RF frequency is 3.2 MHz.

5. (Withdrawn) The method as recited in claim 1, wherein said reactive process gas comprises HBr, O_2, and NF_3.

6. (Withdrawn) The method as recited in claim 5, wherein a flow rate of said HBr is about ten times greater than a flow rate of said NF_3, and said flow rate of said HBr is about fifteen times greater than a flow rate of said O_2.

7. (Withdrawn) The method as recited in claim 5, wherein a flow rate of said rare gas replaces said flow rate of said HBr by an amount up to and including 80%.

8. (Withdrawn) The method as recited in claim 5, wherein a flow rate of said rare gas replaces said flow rates of said HBr, said NF_3, and said O_2 by an amount up to and including 80%.

9. (Currently Amended) A plasma processing system for etching a silicon-comprising substrate comprising:

a processing chamber comprising a process space adjacent said substrate;

a substrate holder coupled to said processing chamber and configured to support said substrate;

means for introducing a reactive process gas to said process space in said processing chamber, said reactive process gas comprising HBr_x ~~and one or more of~~ O_2, and a fluorine-containing gas;

means for introducing a Noble gas to said process space in said processing chamber;

a first system which applies a first radio frequency (RF) signal to said substrate holder, wherein said first RF signal comprises a frequency greater than 10 MHz; and

a second system which applies a second RF signal to said substrate holder, wherein said second RF signal comprises a frequency less than 10 MHz; and

a controller coupled to said processing chamber, said means for introducing a reactive process gas and said means for introducing a Noble gas, wherein said controller is configured to:

introduce said reactive process gas into said processing space; and

introduce said Noble gas into said processing space such that, during etching, a flow rate of said HBr is replaced with a flow rate of said Noble gas by an amount up to and including 80%,

wherein said fluorine-containing gas comprises at least two of NF_3, SiF_4, and SF_6.

10. (Original) The plasma processing system as recited in claim 9 further comprising means for applying a magnetic field to said process space, wherein said magnetic field comprises a magnetic field strength ranging from 5 to 500 Gauss.

11. (Canceled)

12. (Original) The plasma processing system as recited in claim 9, wherein said first RF frequency is 40 MHz and said second RF frequency is 3.2 MHz.

13. (Currently Amended) The plasma processing system as recited in claim 1, wherein said reactive process gas comprises HBr, O_2, SiF_4, and NF_3.

14. (Original) The plasma processing system as recited in claim 13, wherein a flow rate of said HBr is about ten times greater than a flow rate of said NF_3, and said flow rate of said HBr is about fifteen times greater than a flow rate of said O_2.

15. (Canceled)

16. (Canceled)